Bosque Grande Mesquite Control Project

EA No. NM-060-2001-0145

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined the proposed action is not expected to have significant impacts on the environment and that preparation of an Environmental Impact Statement is not warranted.

DECISION: It is my decision to authorize the treatment of mesquite to allow for the implementation of a rest-rotation grazing system on Allotment 65020, Tom Cooper Ranch. About 450 acres of mesquite will be treated on public land and 200 acres on private land, for a total of 650 acres across all lands as part of this project. Location of the project is as follows (refer to the map in the Environmental Assessment):

T. 6 S., R. 26 E.
Portions of:
Section 17: SE¼SE¼
Section 20: E½
Section 21: W½NW¼, NW¼SW¼
Section 29: E½NE¼, SW¼NE¼, SE¼, New Mexico Principle Meridian

Actual application of the herbicide will be done by the BLM. The surface protection procedures set forth in the proposed action have been incorporated into the Environmental Assessment. Any comments made to this proposed action were considered and addressed.

Rationale for Recommendations: The decision to authorize the proposed action does not result in any undue or unnecessary environmental degradation. The action is consistent with planned actions presented in the Roswell Resource Management Plan and Record of Decision, October 1997.

In accordance with 43 Code of Federal Regulations, Part 4100, Sec 4160.2 any applicant, permittee, lessee or other affected interests may protest this proposed decision in person or in writing to the authorized officer, within 15 days after receipt of this decision. Please be specific in your points of protest. In the absence of a protest, this proposed decision will become the final decision without further notice. Any person who is adversely affected by a final decision of the authorized officer may file a written appeal to the Final Decision for the purpose of a hearing before an administrative law judge under 43 CFR 4.470. A period of 30 days after the decision becomes final is provided in which to file an appeal and a petition for stay of the decision in this office (43 CFR §4160.3 [c] and §4160.4).

Bosque Grande Ranch Mesquite Control Project
NM-060-2001-0145

Location:

Township 6 South, Range 26 East

Portions of:
Section 17: SE¼SE¼
Section 20: E½
Section 21: W½NW¼, NW¼SW¼
Section 29: E½NE¼, SW¼NE¼, SE¼

New Mexico Principal Meridian

Allotment 65020
Thomas Cooper

Chaves County, New Mexico

September 12, 2001

Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

A. General Information

The Bosque Grande Ranch (Thomas Cooper Allotment 65020) is located entirely in Chaves County, New Mexico, about 28 miles northeast of Roswell via Highway 285 and Cottonwood County Road (see map). The allotment is approximately 9,648 acres in size of which 6,000 acres are federal land, 640 acres are State land, and 2,300 acres are private land (140 acres are uncontrolled by the permittee, i.e., not owned or leased by the permittee, but not fenced apart from the allotment). A 640-acre, fenced, private pasture located in the center of the allotment is not owned by the permittee or included as part of the grazing allotment. About 142 acres of public land in River East Pasture are uncontrolled to allow for livestock numbers to be run as needed within the entire pasture.

Current range improvements for the management of livestock include several earthen tanks, two windmills, and drinking troughs with associated pipelines, pasture and boundary fences, and corrals. Several water developments and fences identified on the official grazing map are no longer functional since specific improvements may have been built 60 years ago or longer. The majority of the range improvements are privately owned.

Headquarters Well is the most dependable base water on the allotment, qualifying the permittee for livestock grazing privileges on public lands under the Taylor Grazing Act. The Pecos River is not designated as a base water for the allotment

River West Pasture, the pasture proposed to receive mesquite control treatment, was incorporated into the allotment in 1994. Prior to the addition of this pasture, a new fence was constructed by the permittee between River West Pasture and North Main Pasture. An interior pasture fence on the west side of the river is down in several areas, therefore, River West Pasture is effectively one large riparian pasture taking in both sides of the river. The majority of the fence is on public land but does not have a BLM project number associated with it. Cattle depend heavily on the Pecos River as a water source, and the bottomlands for forage during dry periods when it is unavailable in the uplands. Cattle are naturally drawn to the bottomlands because of the availability of food, water and shade. Management of livestock in River West Pasture is affected by the size of the pasture, dense saltcedar stands, and lack of water in the uplands. Cattle continue to congregate in the bottomlands of the pasture.

The allotment has been permitted to be grazed yearlong by cattle. The permit authorized 160 AUs, and grazing will be in accordance with the year 1996 livestock grazing permit. Grazing is by a cow/calf operation. The allotment has been grazed yearlong without a rest-rotation system due to the condition of old pasture fences. Much of the interior fences along the Pecos River are non-functional due to age (1940's), and are not conducive to implementation

A preliminary Cooperative Management Plan is being developed between the BLM and Tom Cooper. The plan specifies the construction of pasture fences, pipelines, brush control, seasonal rest of the riparian area along the Pecos River, and implementation of a rest rotation system.

The Bosque Grand Pasture Fence Project (EA No. NM-060-00-208) and the Bosque Grande Salt Cedar Control Project (EA No. NM-060-2001-0146) are concurrently being developed with this project under a Cooperative Agreement for Range Improvements. This project is planned for Fiscal Year 2002 with the Clean Water Action Plan Funds obligated this fiscal year.

B. Need For the Proposed Action

The need for the proposed action is to improve range and watershed conditions in River West Pasture by reducing the amount of mesquite in the grassland community type. Mesquite has increased to the extent that other desirable shrubs, grasses and forbs are no longer available or have become sparse. River Pasture has much more mesquite plants than the threshold number required for designation of treatment. Ground cover is reduced, exposing more of the soil to erosion and reducing the productivity of the rangesite. The project partially implements the Bosque Grande Cooperative Management Plan.

C. Conformance with Land Use Plans: The proposed activity is addressed as part of the Roswell Resource Management Plan (October 1997).

D. Relationship to Statues, Regulations, or Other Plans: The control of mesquite as a range improvement, either under Cooperative Agreement or Range Improvement Application, is addressed under the 43 Code of Federal Regulations, Parts 4100, Grazing Administration, Exclusive of Alaska., Subpart 4120.3

The proposal to implement a vegetation treatment on mesquite is consistent with the New Mexico Record of Decision dated July 1991, for the *Vegetation Treatment on BLM Lands in Thirteen States*, Final Environmental Impact Statement of May 1991.

E. Other Statues, Regulations or Plans are:

The Taylor Grazing Act of 1934, as amended (43 U.S.C. 315 (a)-(r)).

The Federal Land Policy and Management Act of 1976, as amended (Pub. L. 94-579, 43 U.S.C. 1702 et seq), Sections 302 (a) & (b), Section 502 (a) & (c).

The National Environmental Policy Act of 1969, as amended (Pub. L., 91-190, 42 U.S.C. 4321-4347) Sec. 101.
The Federal Noxious Weeds Act of 1974 (7 U.S.C. 2801-2813) as amended by Section 15, Management of Undesirable Plants on Federal Lands, 1990.

The Carson-Foley Act of 1968 (Pub. L. 90-583).

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The proposed action is to hand-treat approximately 380 acres of public land and 160 acres of private land in River West Pasture of Allotment 65020 infested with mesquite over a two-year period. Application areas would be limited to the Glendale-Pecos-Harkey association and the Yturbide loamy sand soils in areas that are not inundated during flash floods. The application rate for the herbicide would be no more than 0.35 pound of active ingredient of hexazinone per acre (600 pellets). About 2-3 pellets would be used per plant (one pellet per 25 square feet). Application of the herbicide would occur between the first of July and the end of September. The chemical would be hand-applied directly to the individual mesquite hummocks that would be marked after treatment. Important resources would be buffered as per Measures for Vegetation Treatment with Herbicide, Appendix 9, of the Roswell Resource Management Plan. The goal of the project is to reduce the density of mesquite to less than 50 plants per acres within three years after treatment.

All livestock would be removed from the target pasture prior to herbicide application. Livestock would be removed after the first half of annual moisture following herbicide treatment. The area would be deferred from grazing for a minimum of two consecutive growing seasons following herbicide treatment, or until agreement between the BLM and permittee, and depending on the vegetative response in the treated area. The growing season usually begins at the onset of the summer rains (July 4), and continues until the first frost (October 31). The deferment period may be extended for one entire year, or for more than two growing seasons, if drought conditions exist.

At a later date, as early as two or three years after herbicide application, the herbicide-treated area would be burned to remove standing dead vegetation. Mesquite mortality due to prescribed fire is highest when it is burned just after new leaf growth begins. The burns would be conducted between February 1 to April 15. The purpose for this time frame include; (1) the availability of firing and holding resources, (2) relatively low fire activity period, and (3) seasonal weather conditions that would be favorable to achieve the desired objectives. The

Coordination with the permittee prior to burning would include provisions to remove livestock from the area. Grazing will again be deferred after the prescribed fire until the perennial grasses reach an average new growth of three inches or boot stage. Resumption of use will be determined following coordination between the BLM and the permittee. The area may be burned again at later dates to continue maintenance of the area. Prescribed fire has been demonstrated to have the best results if it is conducted periodically in three to five year intervals.

B. Alternatives

1. No Action - This alternative would leave rangeland vegetation condition as it is now whereby the mesquite would be left "as is".

2. Herbicide Application w/o Prescribed Fire - The proposed treatment area would be treated with herbicide but would not be followed by prescribed burning.

C. Alternatives Considered but Not Analyzed

1. The alternatives of No Action, No Use of Herbicides, and No Aerial Herbicide Application have been analyzed in the *Vegetation Treatment on BLM Lands* FEIS and considered in the ROD. Further discussion in this EA is unnecessary since site-specific conclusions and impacts would be essentially the same as in the FEIS.

2. The alternative of grubbing mesquite was considered but not further analyzed. The cost of mechanical control and archaelogical clearance, and amount of surface disturbance, over 840 acres would be prohibitive. This alternative will not be given further consideration in this report; fewer environmental impacts would result from the action as proposed.

III. AFFECTED ENVIRONMENT

A. General Setting

The allotment is located about 28 miles northwest of Roswell via Highway 285 and then Cottonwood County Road. It is situated on the east side of the Pecos River. The allotment is located entirely in Chaves County.

The Pecos River flows north-to-south through a broad alluvial valley on the western portion of the allotment. The area east of the river rises from the valley floor to low terraces that are dissected by numerous draws. Bosque Draw is the major drainage dissecting high terraces to the east. Elevations range from 3,582 feet along the Pecos River to 3,894 feet at Bosque

The climate is semi-arid with normal monthly temperatures ranging from a minimum of 19°F in January to a maximum of 95°F in July at Bitter Lake National Wildlife Refuge (Owenby and Ezell 1992). Observed minimum and maximum temperatures were -22°F and 113°F, respectively (Kunkel 1984). Average annual precipitation is 11.6 inches, primarily as rainfall. Annual precipitation has ranged from 3.11 inches to 21.08 inches (Kunkel 1984).

Public lands on the allotment provide benefits for other users, as well as the permittee. These uses include recreation (e.g., hunting and wildlife viewing). Oil and gas development has occurred on the allotment.

B. Affected Resources

The critical elements of ACEC's, Air Quality, Prime or Unique Farmlands, Native American Religious Concerns, Hazardous or Solid Wastes, Water Quality, Wild and Scenic Rivers, Low Income/Minority Populations and Wilderness would not be affected.

1. Air Quality: Air quality is rated as a Class II area, which allows for moderate development within the standards of the State of New Mexico and the Federal Air Standards. Prevailing winds in the area is out of the southwest throughout the year. There are no communities within 50 miles of the direction the prevailing winds carry, therefore, all smoke will be dissipated before reaching any communities.

2. Soils: The *Soil Survey of Chaves County, New Mexico, Northern Part and Soil Survey of De Baca County, New Mexico (USDA Soil Conservation Service 1983, 1986)* were used to describe and analyze impacts to soils. Soils in the pasture are represented by several mapping units. The Glendale-Pecos-Harkey (GPA) association is on the floodplain of the Pecos River. Slope is 0 to 1 percent. The unit is 40 percent Glendale silt loam, 30 percent Pecos clay loam, and 20 percent Harkey silt loam. The Glendale and Harkey soils are on low ridges, and the Pecos soil is in slightly depressional areas. The Yturbide loamy sand (Ytc) soil type is found on terrace fronts along the Pecos River.

Soil Type	**Permeability**	**Runoff**	**Water Erosion**	**Wind Erosion**	**Inundation**
Glendale	Mod. Slow	Medium	Moderate	High	Rarely Flooded
Pecos	Very Slow	Rapid	High	High	Rarely Flooded
Harkey	Moderate	Medium	Moderate	High	Rarely Flooded

3. Water Quality: Surface Water - The Pecos River is located in the pasture proposed for treatment. Ground Water - The area proposed for treatment is considered to be moderately vulnerable. The water table ranges from 25 to100 feet below the surface as classified by the New Mexico Water Quality Control Commission.

4. Vegetation: Allotment 65020 is comprised of several vegetation community types arranged in a mosaic over the allotment: (1) Grassland; (2) Mixed Desert Shrub; (3) Drainages, Draws and Canyons(DDC); and (4) Riparian/Wetland. The allotment is characterized as a riparian allotment because of its proximity to the Pecos River.

   Grasslands are intermixed with all community types. Alkali sacaton is common in the bottomlands, and is interspersed with saltcedar and cottonwood within the floodplain. Tobosa and burrograss occur in the bottoms of draws and swales. Upland habitat of the allotment can be characterized as a mesquite-dominated grassland since mesquite has become a major component of the vegetative community.

   The Mixed Desert Shrub community is found on the uplands and rough breaks above the bottomlands. Black grama and dropseed constitute the primary grass species, and other plants of the Chihuahuan desert biome are represented.

   In several community types, mesquite has increased in density to the point that it covers a large portion of the total area and competes with all other plants for the available soil moisture. This competition restricts the proliferation of more desirable forage grasses and forbs causing a limitation on wildlife habitat, livestock forage and soil stability.

   Riparian vegetation along the river banks include pockets of Baltic rush, threesquare and cattail. Woody vegetation within the lower floodplain include seepwillow, coyote willow, saltcedar, and Russian olive. Alkali sacaton, alkali muhly, and inland saltgrass are the most common grass species. Common forb species include goldenrod, ragweed, Douglas rabbitbrush, prairie sunflower, and white sweetclover. Older cottonwood trees can be found in several areas and typically occur on higher elevation sandbars and terraces above the active floodplain.

   About 100 acres within the floodplain of the river is dominated by saltcedar growing in patches, strips, or dense thickets. About 48 acres support cottonwood trees with open canopies. Adjacent upland vegetation is mesquite/alkali sacaton shrubland which is encroaching into the floodplain.

   Noxious and Invasive Weeds: Noxious weeds affect both crops and native plant species

competition from noxious weeds and infestations. Noxious weeds can negatively affect livestock productivity by making forage unpalatable to livestock thus decreasing livestock productivity and potentially increasing producer's feed costs. Potential noxious weed species include musk thistle and Russian knapweed. There are no known populations of noxious weeds on the allotment.

5. Floodplains: Floodplain width ranges from about one-half mile to one mile on the allotment along approximately 4.5 miles of the Pecos River. The riparian vegetation community is tied to landform within the floodplain and is influenced by flooding intervals. The land form is comprised of exposed and stabilized river bars, the floodplain, and terraces.

   The river channel is moderately entrenched and slightly confined by the valley. Channel banks are relatively stable, but are actively being cut in some locations. This is most likely due to entrenchment of the channel rather than disturbance associated with land use activities. The channel material is primarily a sand/silt bed with small to medium debris. The stream gradient is relatively flat (0.25 percent).

6. Livestock: The allotment has been permitted to be grazed yearlong by cattle. The permit authorized 160 AUs, and stated that grazing will be in accordance with a 1996 livestock grazing permit. Grazing is by a cow/calf operation. Currently, the allotment is grazed yearlong without a rest-rotation system.

   Range condition is considered to be mid seral with an ecological rating of 47 for the area proposed for treatment (River West Pasture) so that treating mesquite where it has become very dense would improve the ecological rating of the pasture .

7. Wildlife: The allotment provides a variety of habitat types for terrestrial and aquatic wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of open water, the numerous drainages interconnecting upland habitats to the Pecos floodplain, a mixture of grassland habitat and mixed desert shrub vegetation, and riparian vegetation found within the floodplain of the river.

   Numerous avian species use the Pecos River during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge (BLNWR) is several miles downstream from the allotment, and serves as a major focal point for migratory birds (e.g., ducks, geese, sandhill cranes, waterbirds). Common bird species are mourning dove, mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include

Common mammal species using the area include mule deer, pronghorn antelope, coyote, gray fox, bobcat, striped skunk, porcupine, racoon, badger, jackrabbit, cottontail, white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat.

A variety of herptiles also occur in the area such as yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

8. Threatened or Endangered Species: The Pecos bluntnose shiner, Pecos gambusia, interior least tern and the Pecos sunflower are federally listed species that occur or have the potential to occur on the allotment. The status and presence of these species in the RFO area are discussed in the following section.

   Pecos Bluntnose Shiner *(Notropis simus pecosensis)* - Federal Threatened

   Historically, the Pecos bluntnose shiner inhabited the river from Santa Rosa to near Carlsbad, New Mexico. Currently, the subspecies is restricted to the river from the Fort Sumner area southward locally to the vicinity of Artesia, and seasonally in Brantley Reservoir (NMDGF 1988; USFWS 1992). Routine fish community monitoring conducted by the USFWS in the river between Sumner Dam and Brantley Reservoir show the fish remains generally abundant, especially in light of cooperative efforts between the Bureau of Reclamation and the USFWS to more closely mimic natural flows in the Pecos River.

   There are two designated critical habitat areas on the Pecos River within the RFO area. The first is a 64-mile reach beginning about ten miles south of Fort Sumner (Township 1 North), downstream to a point about twelve miles south of the DeBaca/Chaves County line (Township 5 South). The second reach is from Highway 31 east of Hagerman (Township 14 South), south to Highway 82 east of Artesia (Township 17 South). The allotment does not fall within these reaches.

   Pecos Gambusia *(Gambusia nobilis)* - Federal Endangered

   The Pecos gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas.

   Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable

Interior Least Tern *(Sterna antillarum athalassos)* - Federal Endangered

The interior least tern nests on shorelines and sandbars of streams, rivers, lakes, and man-made water impoundments. Records of breeding terns in New Mexico are centered around BLNWR where the species has bred regularly since it was first recorded in 1949. BLNWR is considered "essential" tern breeding habitat in the state. Besides BLNWR, the only known nesting habitat in the RFO area is an alkali flat due north of the refuge on public lands. These are small populations with only a few nesting terns.

Sporadic observations of least terns have been recorded elsewhere in the Pecos River valley. The tern may occur on public lands in Chaves County along the river because suitable nesting habitat is found on sites that are sandy and relatively free of vegetation (i.e., alkali flats). Approximately 44 potential nesting sites are found throughout the RFO area. Other potential habitat sites are saline, alkaline, or gypsiferous playas that occasionally hold water. However, ephemeral playas do not support fish, the main staple for terns.

Specific surveys for nesting least terns have been conducted in potential habitat along the Pecos River and playas by the New Mexico Natural Heritage Program under a Challenge Cost Share project. No other nesting terns have been found to date.

Pecos (Puzzle) Sunflower *(Helianthus paradoxus)* - Federal Threatened

The Pecos sunflower is found along alkaline seeps and cienegas of semi-desert grasslands and short-grass plains (4,000-7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, has the only known Pecos sunflower population on BLM land, which only became evident following a prescribed fire. Potential habitat also occurs on BLM land within the Overflow Wetlands Wildlife Habitat Area.

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas are now invaded by saltcedar growing in dense stands, which may prevent the viability of the Pecos sunflower. Other potential sites include a few springs on the east side of the river. No Pecos sunflower populations have been found on the allotment to date.

scale. However, the changes should repeat the basic elements of the landscape.

IV. ENVIRONMENTAL IMPACTS

A. Impacts of the Proposed Action

1. Air: Air quality will suffer short term decreases on burn days and for a few days following burning. No long-term impacts due to smoke accumulation are anticipated. The smoke dispersal area is unpopulated rangeland and smoke will disperse rapidly with the wind.

2 Soils: Although herbicides would not alter a soil's physical properties, there may be indirect effects on soil microorganisms. Depending on the application rate and the soil environment, herbicides can either stimulate or inhibit soil organisms. When herbicide-treated vegetation decomposes, the resulting addition of organic matter to the soils can support increased populations of microorganisms. Soil microorganisms can metabolize herbicides and often are reported to be responsible for herbicide decomposition (Norris and Moore, 1981). The chemical nature of the herbicide proposed is such that no residue will be left in the soil after approximately three years.

   The increased organic material caused initially by mesquite leaves, stems and roots and secondarily by the increased production of grasses and forbs improve the fertility of the soils. This increase in organic material will also help prevent the erosion hazard of soil blowing.

   Short term negative impacts to the soil are anticipated from the mechanical clearing of firelines prior to the prescribed burn. The soils should stabilize after vegetation once again regenerates in the bladed areas. Short term negative impacts from burning the vegetation cover will occur until re-growth stabilizes the soils. Long term positive impacts are expected to benefit the soil from an increased herbaceous vegetation cover. Increased cover is expected to also increase water infiltration rates and moisture holding ability.

3. Water Quality: After the proposed fire, short term negative impact would occur after a precipitation event that produces streamflow. Ash may be suspended in the flow and deposited in downstream locations. Some soil erosion could occur if the streamflow is high in intensity. After vegetation has re-established, water quality should stabilize or increase due to better protection of the soil by herbaceous vegetation cover.

   Ground Water: Because of the relatively small size of the treatment area and surface drainage patterns, the ground water should not be affected (DRASTIC worksheet has

the mesquite hummocks would be directly affected. The overall effect of treating vegetation would be to achieve the desired successional stage, and improve forage and browse sources for wildlife and livestock.

Annual plants are generally more sensitive than perennial plants to chemical treatments because they have limited food storage organs and annual plant populations are greatly reduced if plants are killed before producing seed. Perennials are most sensitive when exposed to herbicides during periods of active growth. Exposure to herbicides during active growth and before plants become reproductive also would have the greatest negative effect on populations of many annuals. The ability of annual or perennial plants to maintain viable seeds in the soil for several years reduces their susceptibility to herbicides. Control of some woody plants on some sites may open the community to dominance by annuals (Evans and Young 1985).

Hand application of the chemical herbicide hexazinone at the proposed 10.35 pounds of active ingredients/acre, or less, would reduce the present composition of mesquite to an estimated level of less than 50 plants per acre by the second year after application. There is an estimated 64 percent mortality on mesquite using this combination and amount of active ingredient per acre of herbicide. This reduction of mesquite would reduce the competition for soil moisture, which would allow the growth of more desirable plant species for livestock and wildlife.

By reducing the mesquite component, herbaceous species would gain in densities after adequate precipitation occurs. Herbaceous species tend to have abundant seed which germinate and mature more rapidly than woody species or succulents.

All vegetation would be temporarily negatively impacted after burning. The herbaceous species would respond within one growing season with adequate precipitation to level which may exceed pre-burning levels. The mesquite would be lowered for an extended period of time. However, not all of the targeted species would be burned completely or at all. This should lead to a natural mosaic in the area of shrubs, grasses and forbs.

The change in composition of the vegetative community would have the effect of changing the area of treatment from a mesquite-infested alkali sacaton grassland habitat to a more native grassland habitat in a relatively short period of time (approximately two to three years).

There would be no impact to riparian vegetation as treatments would be conducted above the active floodplain terrace.

Noxious and Invasive Weeds: Cattle stocked on the allotment, supplemental feeds, and a

Infestation of noxious weeds can have a potentially disastrous impacts on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop lands, grazing lands and waterways, herbicidal and other weed control strategies can be implemented at further costs to producers and government agencies. Increased cost to producers are eventually borne by consumers. The potential for the dissemination of invasive and noxious weed seed on public lands would remain low on the allotment due to the limited use of the lands and increased public awareness of the noxious weed problem. Any populations of noxious weeds found on the allotment would be treated according to prescribed control methods for the particular species encountered.

5. Floodplains: There would be no physical impact to the floodplain of the Pecos River as treatments would be conducted by hand with no heavy machinery. Floodplain and function health would improve from the removal of mesquite.

6. Livestock: The goals of rangeland treatment for livestock include suppressing plant species that are in this case restrictive due to thorns, and improving a more desirable mix of vegetation while increasing forage production by controlling competing vegetation. Chemical treatments are generally applied in a form or at such low rates that they do not affect livestock. Herbicide applications would be made when livestock are not in the pastures.

   Using herbicides, according to EPA labelling, is the most efficient and effective way to control some competing vegetation and noxious weeds.

   Grazing would occur in the project areas following green-up and establishment of herbaceous vegetation. Continued pasture rotation of cattle and reduction of overall livestock numbers during drought would ensure longevity of the project.

7. Wildlife: Wildlife species depend directly on vegetation for habitat, so any change in the vegetation of a particular plant community is likely to affect the wildlife species associated with that community. Any change in community vegetation structure or composition is likely to be favorable to certain animal species and unfavorable to others. Therefore, any change in vegetation community structure or composition affects resident wildlife populations. Effects on wildlife from vegetation management would be both positive and negative, depending on the species affected and the type of treatment used.

   Chemical treatments traditionally have been applied most frequently to decrease woody plant cover and increase the production of grasses. The control of woody plants, especially by selective herbicides, often results in the initial control of associated broadleaf forbs, both categories of plants contain species which may be important food for many

with different types of habitat. This usually has a temporary effect on all wildlife species. Enhancing the structural diversity of vegetation by controlling shrubs and increasing understory species in a mosaic pattern should increase bird diversity. Some negative impacts can be lessened if the period of treatment avoids the bird nesting season and other critical seasons when loss of cover would be critical to wildlife; for example, during critical reproductive periods (from April to June).

Impact to wildlife would naturally be short term following the prescribed burn. As with any fire, whether natural or man caused, some mortality of small animals, reptiles and birds would occur. In most cases, wildlife would be displaced in the short term by the fire and the loss of vegetation and then would return when vegetation begins to grow back. Some shift of wildlife may occur within the burned areas. Species favoring dense, heavy brush may vacate the area, while species favoring open or savannah type habitat may inhabit the area.

After treatment of mesquite, the increase of forb and grass species would most likely lead to an increase in use of the treated areas by wildlife species that prefer a grassland type, such as pronghorn antelope and mule deer which in turn could lead to an increase in the number of hunters using the area. The recreational value would correspond to the availability of animals for hunting or viewing.

8. Threatened and Endangered Species: There would be no effect to listed species as they do not occur within the proposed project area.

9. Cave/Karst: The proposed action would not affect cave/karst resource.

10. Visual Resources: The proposed action would change the color and texture of the landscape by partially replacing the mesquite cover with grasses and forbs. The potential creation of straight lines and stark contrasts in texture and color would be mitigated, at least in part, by the burn pattern produced by the fire. A mosaic of vegetation with irregular edges will be produced providing variety in color, form and texture. In the long term (in excess of one year following each treatment) increased lush plant growth and diversity will tend to change the visual character of the area in a positive manner.

B. Impacts of the Alternatives

1. No Action - This alternative would not significantly change the present conditions. The area would primarily remain in a status quo condition with the area dominated by mesquite. Wildlife populations would remain unchanged under this alternative. No increase of forage or stabilization of the soils would occur.

amount and density of shrubby vegetation. Introducing fire back to the ecosystem under controlled prescribed conditions would stimulate the natural vegetation in the area. Using fire in combination with an initial herbicide application would serve to hasten the process of returning the area to a savannah grassland. Future use of prescribed fire in the area would help to maintain the grassland aspect, and would reduce the need for future herbicide applications.

C. Mitigation Measures and Residual Impacts

Impacts to the following resources and values would not be mitigated under any alternative and are considered to be residual impacts:

- Short-term change in chemical composition of the uppermost soils layers due to the change in abundance of organic matter.
- Long-term change in vegetative composition within the treated area.
- The RFO Wildlife Biologist has determined that the amount of land left untreated in the vicinity of the project will adequately serve the needs of the short-term disruption in the wildlife use of the area.

No additional mitigating measures would be needed if the standard operating procedures and design features previously discussed are adhered to. No additional mitigating measures would be needed as long as the prescribed burns stay within the parameters set forth in the Proposed Action and Burn Plan.

D. Cumulative Impacts

Other range improvements such as water wells, pipelines and ranch roads have been constructed within the area of the proposed action via private funding. The possibility of mesquite manipulation through herbicide application or prescribed burning on additional public and private lands in the future exists.

The treated areas would have the effect of creating a more diverse vegetative composition of allowing for increased grass cover and forbs, while retaining mesquite in the untreated areas. Heavier livestock concentrations would occur in treated areas, resulting in a lighter concentration overall.

Any cumulative impact of the proposed treatment of mesquite on wildlife would be dissipated by the condition of the surrounding treated areas outside of this allotment. The conditions would result from the dates that the other areas were treated, the life span of those projects, and whether they have been recently treated (less than three years) or are nearing the end of the projects life span (approximately 15 to 20 years), or never have been treated. Wildlife

chemical mixture are non-carcinogenic and non-mutagenic.

V. PERSONS OR AGENCIES CONSULTED

The following are people who have been consulted for their comments in regards to the proposed action. The comments and suggestions expressed during the consultation have been incorporated into this EA.

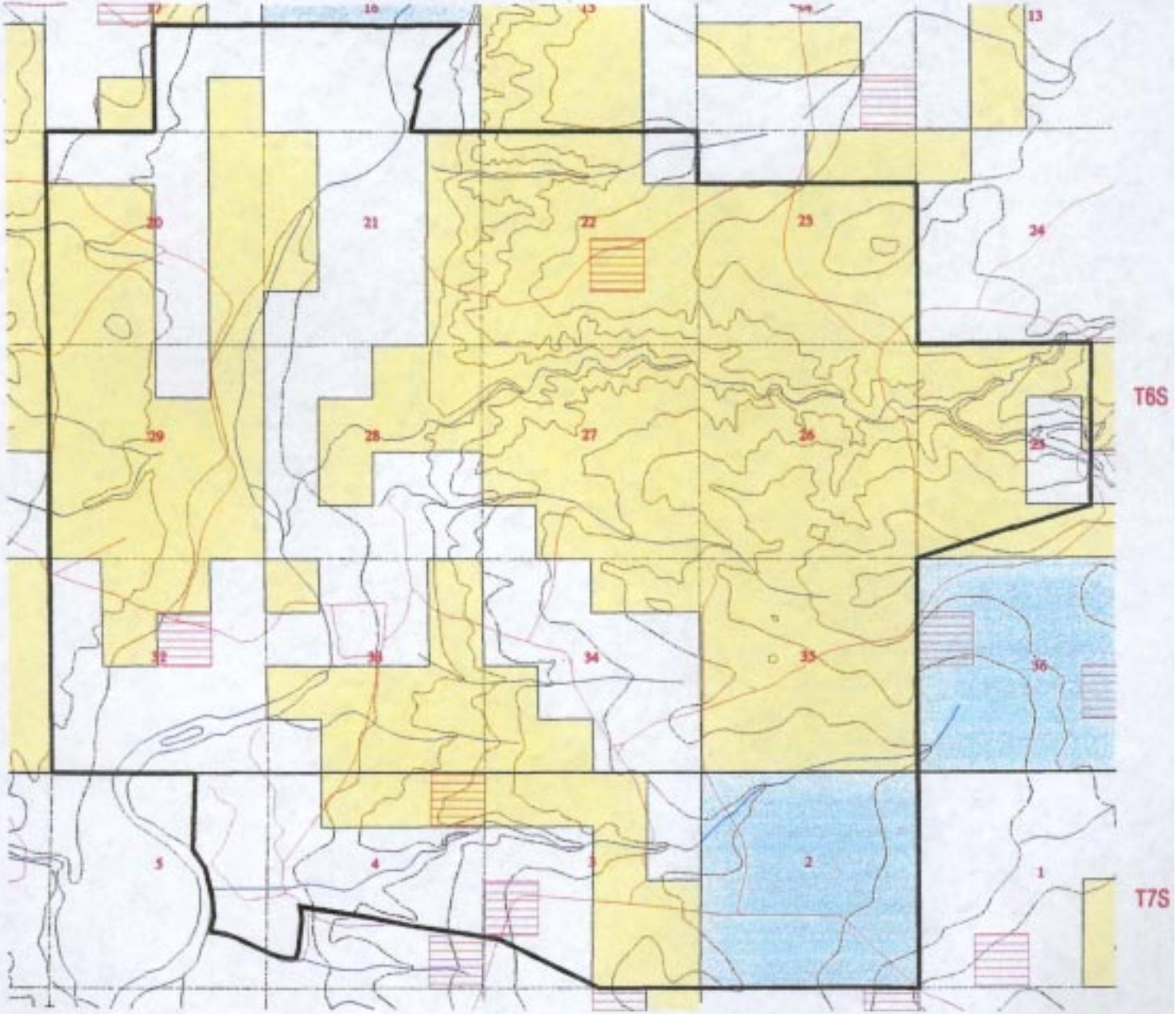
John Spain, Rangeland Management Specialist
Roswell Field Office, BLM

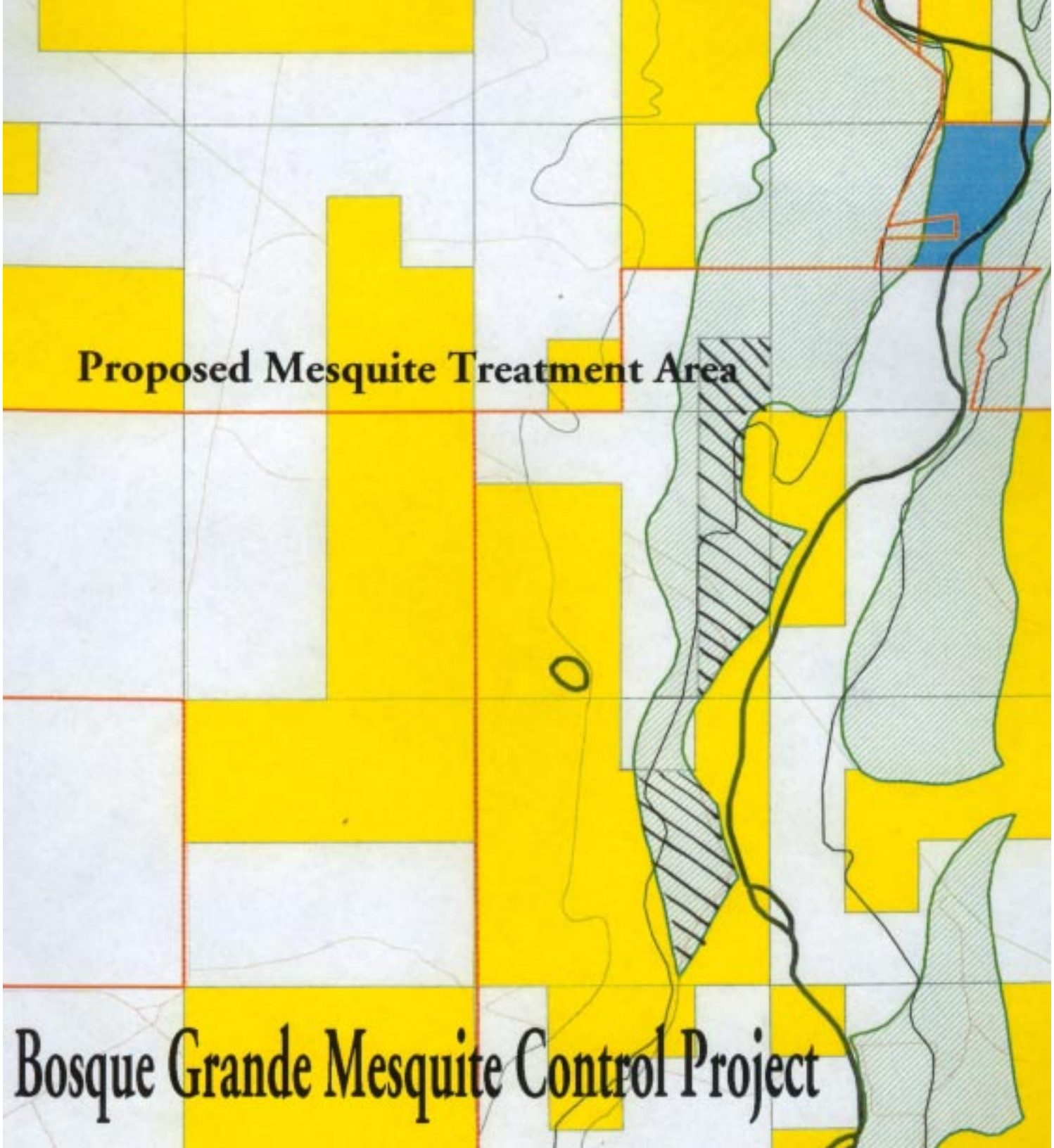
Roy Stoval, Support Services
Roswell Field Office, BLM

Helen Miller, Rangeland Management Specialist
Roswell Field Office, BLM

Tom Cooper, Permittee
Las Cruces, NM

Saltcreek 100k




Proposed Mesquite Treatment Area
Bosque Grande Mesquite Control Project